Question3

Solution :

Construct a flow network as a directed graph:

1. All of the computers are vertices, each one-directional links between two computers means there should be one directed edge of between two vertices, and the capacity of edge equal to the cost of removing link. The source is the computer 1 and the sink is the computer N.
2. Then we can compute maximal flow by Edmonds-Karp algorithm. After converged, we construct the last residual network flow and look at all the vertices to which there is a path from the source S. Then we can get the minimal cut, look at all the edges crossing such a minimal cut, all the edges are edges which should be removed to achieve this minimum cost. The total capacity of such edges determines the minimum total cost to disconnect the computers as required.